

# CALIFORNIA'S HEALTH

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## Fluorine in Relation to Dentistry\*

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When we go back far into history, and even include archaeological studies from the Danish Stone Age, we find that human beings have always been subject to dental diseases. Bremner, in his *Story of Dentistry* states that, "Decay of human teeth from ancient times has been found in so many places that it is legitimate to doubt whether there was ever an epoch when the human species was not cursed with a toothache." The Papyrus of Ebers, written about 3700 B.C. mentions dental diseases. Ancient Chinese writings mention them, and suggest that worms were the causative agent. Hippocrates included dental diseases along with diseases of other parts of the body. Galen, in the Second Century A.D., first mentions the possibility of associating dental diseases with nutritional deficiencies.

Superstition came into play again during the dark ages and it wasn't until the Eighteenth Century that any thought was given to it. Actually, it was not until the first of the Twentieth Century that our present-day knowledge was started—studies that actually were our basis for fluorine in dentistry as we know it today.

### Records of Endemic Fluorosis

Chronic endemic fluorosis, or mottled teeth, was first recorded in Italy, in 1901, by E. J. Eager of the United States Public Health Service. He referred to the disease as "black teeth." The first known record in the United States of fluorosis was in 1909 in Denver, in a report presented to the Denver Dental Society. The first request for assistance came in 1915, from the citizens of Mammouth, Arizona, who appealed to the University of Arizona for aid in discovering the causes of discoloration of the teeth of children. McKay and Black

were the first to study this condition in the United States and to publish the results of the study. Dr. Black was the first to term the condition "mottled teeth," a term that has become universally accepted.

Following this initial work, McKay applied himself to the investigation of this disease, the results of which, published in 1918, 1919, 1927 and 1928, established the relationship of drinking water to the occurrence of dental fluorosis. Mr. H. V. Churchill, of the Aluminum Company of America, reported in 1931 that fluorine occurred in water from an area in which dental fluorosis was endemic, and that there was practically a 100 percent mottling of the teeth of native-born children in this area. Smith, Lantz, and Smith at the same time correlated the mottling of teeth with the occurrence of fluorides in the water at St. David, Arizona.

### Epidemiological Studies

It was not, however, until the 1937-39 period that any epidemiological studies were made in the areas of endemic dental fluorosis. These surveys showed that there was a marked reduction in dental caries in areas of endemic dental fluorosis. These surveys showed, too, that there was a marked reduction in the dental caries index even when the concentration of fluorine in the water did not approach the concentration needed for the mottling level.

Further scientific studies made since this period have demonstrated that a fluorine concentration of 1.0 parts per million in the drinking water has a beneficial effect in preventing dental caries. Conversely, a high

\* Presented at Institute and Workshop in Nutrition, University Extension, University of California, August 7, 1947.

† On educational leave, 1947-48.

fluorine content of the water produces in those children who are susceptible a serious damage to the tooth structure which we speak of as endemic dental fluorosis. There is practically no mottling with a concentration of 1.0 parts per million. At 1.5 there is a questionable amount, visible probably only to a trained observer. At concentrations beyond that the degree of mottling becomes more marked.

Quantity of fluorine	Degree of mottling
1.5-2.2 parts per million	slight
2.2-3.4 parts per million	medium
3.4-6.0 parts per million	marked
6.0-up	severe

The main characteristic of mottled enamel is its dull, chalky-white appearance. In some cases the whole tooth has lost its translucency, but in milder cases paper white spots are distributed unevenly over the surface of the tooth. In severe cases the teeth are severely pitted and corroded. The enamel may or may not stain later, the color of the stain varying from a yellow through orange-red to almost black. Usually if all of the teeth are mottled, they are not all stained, the stain being more pronounced in the upper central incisors. It is characteristic for this stain to more or less follow the lip line and the suggestion is that the exposure to light may be a factor to its production. Mottled enamel is primarily a defect of the permanent set of teeth, only rarely observed on deciduous teeth.

It is therefore evident that fluorine in drinking water is effective, either in rendering teeth caries-resistant or, in toxic amounts, in producing mottled enamel, only when the crowns of second or permanent teeth are in the process of formation. It applies then, up to the ages of 8-10 years.

#### Topical Application

This relationship between the presence of fluorides in the water supply and the prevalence of dental caries brought about fairly large scale experimental studies to determine whether the topical application of some of the various fluorides would not give an immunity to caries on the same basis as did the ingestion of water containing fluorides. These studies have almost proved that topically-applied fluorides do reduce the incidence of dental caries under certain conditions. There is still much work to be done before it is an absolutely accepted fact, but the studies of Knutson and Armstrong, and various other workers in this field, indicate that four applications of a 2 percent solution of sodium fluoride will reduce the caries index about 40 percent.

The number of applications needed, the concentration of the solution used, and the duration of the immunity rendered, are still matters for speculation and investigation. For instance, Knutson uses a 2 percent

aqueous solution with four applications, while Jordan recommends a larger number of applications and Cheyne and Bibby suggest a lower concentration than the 2 percent. It is still undecided how long this protection will last, and whether or not the application will have to be renewed periodically. Can it be applied or given in any other form?

Bibby, in experiments on the solubility-reducing effects of various fluoride mixtures, found that the addition of fluorine to different dentifrices—pastes, powders, and liquids—led to the conclusion that it exerts some solubility-reducing effect when mixed with dentifrices, but that the results in most instances were less satisfactory than those obtained with the usual aqueous solutions of sodium fluoride.

It is interesting to note that in the study of the effect of the dentifrices it was found that in the control group some of the dentifrices exerted a slight solubility-reducing effect on enamel. This suggests that the solubility of tooth enamel is influenced by ions other than fluorine. This also presents a reason why the topical application of fluorine is effective on young children, but not on adults; since newly erupted teeth present an immature or chemically unreacted surface, which under normal conditions is a fairly soluble hydroxyl apatite, anything which reacts with it to form a less soluble apatite or phosphorus complex will increase the resistance to dental caries. Therefore, reduction of caries appears more complete when the newly erupted teeth are treated, rather than later. In other words, the fluorine should be used before the enamel has the chance to react to ions other than fluorine.

Just how this decrease in the caries index is brought about, is not exactly known. One theory which was mentioned above concerned the solubility of the enamel. Another is that the acid producing potential of the dental environment is decreased by the use of fluorides which act as enzyme inhibitors. We know that there is a relationship between fluorine and lactobacilli—that lactobacilli do not flourish in the mouths of people in areas where the water has a high fluorine content. One fairly certain fact is that the effectiveness of fluorides is largely limited to the prevention of decay and does not extend to controlling active dental caries.

#### Fluorine Intoxication

Not only must we consider fluorine in relation to the teeth, but we must also consider the fact of fluorine intoxication, the effect of fluorides on other parts of the body.

Fluorides are protoplasmic poisons of importance and considerable scientific interest. Fluorides in toxic amounts at least, are cumulative. I say at least because

we don't know for sure yet, and won't know probably for some time to come, just what the cumulative action of small amounts is. Ingestion over a long period of time of small quantities such as occur in drinking water in some districts, we know to produce mottled teeth and other abnormal bone formation. In larger amounts it produces local necrosis of the mucus membrane, and, after absorption, acute and chronic poisoning, gastroenteritis, hepatic, and other visceral degeneration, with nutritional disturbances. High toxic amounts can produce death. There is a narrow margin between the amount of fluorides which is beneficial and the amount which is harmful, and even this varies with the individual.

There are further factors which must be considered in relation to the fluoride content of the water supply. One of these is the presence of fluorine in foods. The occurrence of fluorine in edible foods varies according to several factors.

1. The fluorine content of the soil.
2. The fluorine content of the water.
3. Geography.
4. Time of year.
5. Water level of wells.

Fish are known to be quite high in fluorine content. For instance, the water supply on the Isle of Tristan de Cunha tested at 0.2 parts per million. The diet of people on this island was composed practically entirely of fish. Yet mottled teeth were quite prevalent. There is the question of milk in relation to fluorine content of the water supply which is available to cows. These questions deserve more complete study.

#### Endemic Areas of Dental Fluorosis

Distribution of the endemic areas of dental fluorosis is world-wide. In the United States there are approximately 355 such areas distributed among some 25 states. About 86 percent of those areas are located west of the Mississippi. In California there are 12 endemic areas, but fortunately they occur in the desert sections for the most part, and concern only a population of from 5,000-10,000 people. There might be other areas as yet unlisted.

Fluorine in California is encountered in the geysers at Calistoga; in the Lassen area; in hot springs near Santa Barbara; on the east side of the Sierra Nevada near Mono Lake; Keough Hot Springs near Bishop; Murietta Hot Springs; Agua Caliente Hot Springs; and at Elsinore, even though this water is essentially well water. Fluorine is also encountered to a certain extent in the coast range mountains between Maricopa and Lompoc and to a slight extent in the Sierra Madres near Los Angeles.

For the most part the desert offers the problem where well water is concerned. In the Twenty-nine Palms area there are approximately 100 wells all of which show toxic amounts of fluorine. The average concentration of fluorides in these well waters is approximately four parts per million. In some cases it is found to be as high as 20 parts per million. In such cases there are three alternatives in respect to the toxic waters.

1. Find wells of low concentrations.
2. Haul in water from the outside.
3. Removal of excess fluorides.

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#### Course in Children's Dentistry

Dentists participating in public children's dental health programs in California are offered an opportunity by the State Department of Public Health to attend a special 10-day refresher course in children's dentistry at the College of Physicians and Surgeons, San Francisco.

Courses will be given in January, February, March, May and June of 1948.

The tuition fee of \$75 and travel expenses if over \$5 will be paid by the department for qualified applicants.

Further information and application forms may be obtained from the Bureau of Maternal and Child Health, 760 Market Street, San Francisco.



## Notice of State Board of Health Public Hearings

The California State Board of Public Health will hold public hearings on the adoption of proposed regulations concerning the licensing of institutions for the care of handicapped persons and for the amendment of clinical laboratory regulations at its regular monthly meeting at 10 a.m., December 19, in Room 668, Phelan Building, San Francisco.

### Handicapped Institution Licensing

The proposed regulations for the licensing of institutions caring for handicapped persons have been formulated in accordance with recent legislative action on this subject (Chapter 3, Sections 1500-1517, inclusive, Division 2, Health and Safety Code.)

Regulations proposed are to institute standards for establishments not previously subject to licensing. These include facilities which provide care and treatment on both a resident and nonresident basis.

A handicapped person is defined as one who does not have complete use or control of his body or limbs because of physical defects whether congenital, or acquired through disease, accident, or faulty development. Handicapping conditions include conditions such as those of an orthopedic nature (cerebral palsy, poliomyelitic paralysis, etc.), those due to loss of vision or hearing, and those resulting from rheumatic or congenital heart disease.

Standards are proposed governing the physical plant of establishments, adequacy of accommodations, and facilities and equipment for care. A declaration of policy of operation is required of each establishment subject to licensing, with a trained or experienced executive officer or superintendent in a position of authority and responsibility to carry out policies. Personnel qualifications are referred to, with provision for physical examination of attendants.

Standards are proposed for medical attendance and examination of patients, schedules for children, and nutrition. Minimum requirements regarding records and reports are stated. Copies of the proposed regulations are available for inspection in the State Department of Public Health offices in San Francisco and Los Angeles.

### Clinical Laboratory Regulations

The proposed changes in the clinical laboratory regulations are concerned with the amendment of Sections 1030-1052, inclusive, of the Administrative Code (Title 17, Chapter 2, Subchapter 1, Group 2). They provide for elimination of the provision which permits persons to apply for technologists' licenses after having

had 10 years' experience as a clinical laboratory technician. It provides that the applicant for technologist license must have had, in addition to a college degree, a specified number of semester units in each of a specified number of courses.

The proposed changes also list reasons for revocation of the technologist's or technician's license. These reasons include permitting an apprentice to make tests and act as director in the absence of a licensed technician or the director, violation of the Business and Professions Code governing the practice of medicine, violation of the premarital and prenatal laws, falsifying of application for licensure, advertising laboratory procedures to the lay public and accepting specimens or submitting reports to persons not licensed by law to submit or receive same.

The proposed changes include a provision requiring that each clinical laboratory technician and technologist shall keep the State Department of Public Health advised of his current address. It also provides that each clinical laboratory director shall advise the Department of changes in technical personnel in his laboratory.

The proposed changes eliminate the provision which invalidates a license if the person has remained inactive for a period of five years or more.

Throughout the regulations, minor deletions and additions will be made to make the regulations consistent with current laws.

Copies of the proposed amendments are available for inspection in the State Department of Public Health offices in San Francisco and Los Angeles.

## Control of Brucellosis In Cattle Aim of New Legislation

The program for the control of brucellosis in cattle under Chapter 1460, Statutes of 1947, which takes effect January 2, 1948, is rapidly beginning to take shape under the administration of the State Department of Agriculture.

The law requires the vaccination of all female dairy calves, and provides for optional vaccination of male dairy and beef calves. Calves will be vaccinated between 6 and 12 months of age by accredited practicing veterinarians, using vaccine purchased and distributed by the Division of Animal Industry.

The function of the State Department of Public Health in the program will be the testing and approving of each serial lot of "Strain 19" vaccine which is to be used.

Vaccination of calves is expected to develop resistant young stock for future herds and gradually to eliminate brucellosis in cattle.

## Dates Set for 1948 Social Hygiene Day and Nursing Week

The attention of those now or soon to be engaged in planning programs for 1948 is called to two recently announced dates for nation-wide observances during the coming year: February 4, National Social Hygiene Day; April 11-17, National Public Health Nursing Week.

### Social Hygiene Day

Theme for 1948 social hygiene programs, as announced by the American Social Hygiene Association, will be "Find the Missing Million—Stamp out V. D.," referring to the approximately 155,000 cases of syphilis and 825,000 cases of gonorrhea that escape diagnosis and treatment each year.

Emphasis is to be placed on stepping up every aspect of preventive effort, particularly family life education and law enforcement.

### Public Health Nursing Week

As in the preceding three years, public health nursing week will be sponsored by the National Organization for Public Health Nursing in cooperation with national, state, and local agencies.

Objectives of the 1948 observance are:

1. To highlight the little-known fact that public health nursing services are for people of all incomes.
2. To point up public health nursing as a satisfying career. (More public health nurses are urgently needed.)
3. To stimulate the organization of public health nursing services wherever needed. (One thousand one hundred thirty-three counties and 23 cities still have no public health nursing services.)
4. To increase financial support for public health nursing.
5. To promote citizen participation in public health nursing services as volunteers, members of boards and committees.

## Dr. James Perkins New N.T.A. Head

Dr. James E. Perkins has been appointed managing director of the National Tuberculosis Association to succeed Dr. Kendall Emerson.

Dr. Emerson will retire to private life on January 1, 1948. He has served as director of the N.T.A. since 1928.

Dr. Perkins, the new director, has been connected with the New York State Department of Health since 1934, for the past year as deputy commissioner.

Early rising and much breathing are profitable to keep a man in health and to increase his riches and wisdom.—Plato

## Prostitution Still Here—Still Spreading Venereal Disease

If there is any doubt that prostitution is a spreader of venereal disease and that as such it constitutes a continuing and significant public health problem in this State, a careful study of a report by the Venereal Disease Service of this department should dispel it.

In the first nine months of this year, 2,738 prostitutes were named as sources of infection by venereal disease patients. This figure was 20 percent of the total of 13,948 contacts reported in epidemiologic investigations of venereal disease cases.

How many other cases were spread by prostitutes who were not named as contacts, or how many cases go undiagnosed and uninvestigated in areas of the State not staffed for such service are unknown factors which would certainly add to the totals presented.

These figures show two clear and undeniable facts:

1. Prostitution continues to be a major factor in the spread of venereal disease.
2. Prostitution is widespread in California at the present time.

## Clams Implicated in Five Typhoid Cases

Five cases of typhoid fever were reported from various areas of the State during October—all among persons who reported eating raw clams in Pismo Beach, San Luis Obispo County. Four of the cases reported were Type "E." One death among the infected individuals has occurred.

A quarantine has been placed on clams and other shellfish in the area by the local health department. The state department is assisting local authorities in making an investigation of the situation.

## Tuberculosis Incidence Correction

Of the 7,521 cases of pulmonary and other forms of tuberculosis reported in California during 1946, 1,356 were not reported before death.

Pulmonary and other forms of tuberculosis reported from State Institutions during 1946 totaled 558. Of the total, 103 were not reported before death.

These figures supersede all other tuberculosis morbidity and mortality statistics for 1946 printed in recent issues of *California's Health*.

There is no sound distinction between prevention and cure, except that prevention is a cure really effected in time and that so-called cure is often delayed prevention.—C. E. A. Winslow

### Four-Week Course Arranged for Army V.D. Investigators

A four-week course for military venereal disease investigators has been arranged by the San Francisco and state health departments at the request of the U. S. Army.

One investigator from each Army unit in Northern California will be assigned to the course which will consist of lectures and field work in local health departments in the San Francisco Bay area.

Objectives of the educational program are to improve interviewing techniques among Army venereal disease investigators and give them a better understanding of the work of local health departments.

### Advisory Board Outlines Children's Dental Program

In an effort to try to discover "What is a good dental health program for children," the U. S. Children's Bureau last year called in a group of authorities in the field of dentistry for children, public health research and general practice to discuss the problem and make recommendations with regard to dental care in public programs.

The recommendations which came from this meeting were approved by the Association of State and Territorial Health Officers in April of 1946 and reported by Dr. John T. Fulton in *The Child*, November, 1946.\*

The first principle which the group formulated was that all programs for children should provide facilities for dental treatment, as well as dental health education. Education is of questionable value unless some means can be found to help translate ideas into action.

The second principle which Dr. Fulton reports is this: If services must be limited on account of lack of funds or personnel, the limitation should be placed on numbers, or on the age groups, of the children to be given care. It is better to provide adequate care to small groups of children than to provide limited services to large numbers. Otherwise, in a dental program there is always the danger—because of the great accumulation of needs—of reducing treatment to emergency services only; such services hold no hope of bringing the problem under control.

The third principle recommended concerned the age of children to be given services. "The program," the principle states, "should begin with the youngest of age groups possible and once begun should provide care for these same children every year. As very young children are susceptible to dental diseases, the idea of starting a

program with them is sound. Furthermore, the evidence is clear that once the accumulation of dental needs has been taken care of, the problem of keeping these children's mouths healthy become much easier, provided that the mouths are examined and corrections made, at frequent intervals."

#### Essential Elements

As a further point in their recommended standards, the consultants provided the following list of the essential elements of good dental health service:

1. Examination and diagnosis.
2. Cleaning.
3. Repair of decayed or injured teeth.
4. Treatment of exposed nerves.
5. Treatment of gum and mouth infections.
6. Extractions.

Dr. Fulton summarizes the report by stating that: "These principles for public dental health programs for children seems to be a move in the right direction because (1) they set forth a definition of the essential elements in the dental care of children, (2) they provide a sensible approach to the control of the problem, and (3) they offer a program which can be started on a sound basis with almost any limitation of personnel and which can be added to step by step, as these limitations are removed. As long as the ultimate objective is kept in mind, expansion can take place from time to time as resources become available, and eventually result in the program that produces good dental health for all the children in the most economical way."

### Food and Drug Inspector Examination

The State Personnel Board will hold an examination for Food and Drug Inspector on December 27, 1947. Last date for filing applications is December 6th.

Further information and application forms may be obtained from State Personnel Board offices in Sacramento, San Francisco or Los Angeles.

### Fetal Mortality High in Caesarean Section

"Fetal mortality in caesarean section is higher than that for vaginal delivery," states Dr. Henry S. Acken in a recent number of the *Journal of Obstetrics and Gynecology*.\* Dr. Acken not only reports on a series of studies which bear out this fact, but analyzes as well the factors responsible for the loss. Those interested in infant mortality in all its varied aspects will find much interesting reading in this paper.

\* John T. Fulton, "Better Teeth and Healthier Children," *The Child*, November, 1946.

\* Henry S. Acken, Jr., M.D., "Fetal Mortality High in Caesarean Section," *J. Obstetrics and Gynecology*, 53: 927-34 (June, 1947).



## U. C. Medical School 1948 Postgraduate Courses Announced

The postgraduate courses for qualified physicians listed below have been announced by the University of California Medical School, San Francisco, for 1948.

*Orthopedic Surgery*, February 9 through 13; *Hematology and Blood Disorders*, February 16 through 20; *Internal Medicine and General Surgery*, June 21 through 25; *Cytological Diagnosis of Cancer by Smear Technique*, June 21 through July 2; *Pediatrics*, June 28 through July 2; *Ophthalmology*, September 6 through 10; *General Medicine*, evening lectures, two hours every Monday, 12 weeks, September through December, to be announced; *Psychiatry and Neurology*, full-time course, 12 weeks, September through December, to be announced.

Fees for these courses will be announced in the detailed programs which will be sent upon request to: Stacy R. Mettler, M.D., Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22, California.

All the courses listed above are available to veterans under the provisions of the GI Bill of Rights, upon presentation of Letter of Eligibility and Entitlement.

## Local Health Departments Increase MCH Services

Local maternal and child health services are definitely on the increase judging by a tabulation of services performed by 44 county and 10 city health jurisdictions during the first quarter of 1947.

Diphtheria immunizations by local health departments, for example, totaled 600,000 during the first quarter of this year, more than double the number for the first three months of 1946.

Patients admitted to prenatal clinics and to antepartum nursing service increased 40 percent. Maternity classes had an attendance of 3,220, more than double the number for last year.

Admission of infants and preschool children to medical and nursing service also increased, the total being 30 percent above last year's mark. More than 13,000 infants were admitted to child health conferences and approximately the same number of preschool age children were given this service.

Smallpox vaccinations, on the other hand, decreased during the first quarter of the year in comparison with last year. The large-scale vaccination program of 1946 was probably a factor in this decrease.

"Health is not only to be well, but to be able to use well every power we have."—*Florence Nightingale*

## Attorney General's Opinion

### County Hospital Head May Prohibit Treatment by Certain Doctors

It is the Attorney General's opinion that a county hospital superintendent or a county board of supervisors may prohibit treatment of patients in the hospital by doctors other than staff doctors or those licensed by the State Board of Medical Examiners.

Rendered in answer to a question by a county district attorney, the opinion states that since hospitals are usually set up for the practice of one school of medicine, that is, that type practiced by physicians and surgeons licensed by the State Board of Medical Examiners, they could not be readily adjusted to treat patients for other or different schools of medicine. "With this in mind," the Attorney General continues, "we believe it would be quite proper for the supervisors or the superintendent to further limit the individuals who may practice or treat patients in the county hospital. This might, in our opinion, be limited to a particular school or to a staff of doctors selected by the superintendent of a staff group or committee."

## Richmond Clinics at New Location

The Richmond Health Department's clinics for venereal disease, physiotherapy, crippled children, immunization, and rheumatic fever were moved to the new health department quarters at 539 South 14th Street, Richmond, in November.

Administrative offices were moved to the new location in September from old headquarters at the City Hall.

## U.S.P.H.S. Research Grants

During the 20-month period from January, 1946, through August of 1947, the U. S. Public Health Service activated 699 research projects and made 913 grants under National Institute of Health research grants-in-aid programs. The total amount of funds made available to investigators was \$10,214,174.

Ten projects and 12 grants totaling \$357,243 were for the study of public health methods.

## Three Anthrax Cases

Three cases of anthrax among veterinarians who had been working with infected cattle have been reported in recent months from Glenn, Kern and San Joaquin Counties.

No deaths occurred, the patients responding to penicillin treatment.

### Visiting Nurse Associations

Visiting nurse associations are now functioning in 21 counties throughout the State. A complete list of these agencies by county follows.

#### Visiting Nurse Services in California, November, 1947

##### ALAMEDA COUNTY

Berkeley Nursing Service, City Hall Annex, Berkeley  
Oakland Visiting Nurse Ass'n., 121 E. 11th St., Oakland

##### CONTRA COSTA COUNTY

American Red Cross Visiting Nurse Service, 3200 MacDonald Avenue, Richmond

##### FRESNO COUNTY

American Red Cross Visiting Nurse Service, 2823 Fresno St., Fresno

##### LOS ANGELES COUNTY

Community Visiting Nurse Ass'n., 511 Security Bank Bldg., Glendale  
Long Beach Social Welfare League, 921 Pacific Avenue, Long Beach

Los Angeles Visiting Nurse Ass'n., 2530 W. 8th St., Los Angeles  
Pasadena Visiting Nurse Ass'n., 328 N. Lake Ave., Pasadena  
Santa Monica Visiting Nurse Service, 1508 6th St., Santa Monica

##### MARIN COUNTY

American Red Cross Visiting Nurse Service, 712 5th St., San Rafael

##### NEVADA COUNTY

American Red Cross Visiting Nurse Service, P. O. Box 52, Grass Valley

##### ORANGE COUNTY

Orange County Visiting Nurse Ass'n., Santa Ana

##### RIVERSIDE COUNTY

Riverside Visiting Nurse Ass'n., 4238 Orange St., Riverside

##### SACRAMENTO COUNTY

American Red Cross Visiting Nurse Service, 1300 G St., Sacramento

##### SAN BERNARDINO COUNTY

Redlands Visiting Nurse Ass'n., 114 W. Vine St., Redlands

##### SAN DIEGO COUNTY

San Diego Visiting Nurse Ass'n., 737 17th St., San Diego  
Escondido Visiting Nurse Ass'n., Escondido

##### SAN FRANCISCO COUNTY

San Francisco Visiting Nurse Ass'n., 1636 Bush St., San Francisco

##### SAN MATEO COUNTY

American Red Cross Visiting Nurse Service, 224 Primrose Road, Burlingame

##### SANTA BARBARA COUNTY

Santa Barbara Visiting Nurse Ass'n., 133 E. Raley St., Santa Barbara

##### SANTA CLARA COUNTY

San Jose Visiting Nurse Ass'n., 74 S. 2d St., San Jose

##### SANTA CRUZ COUNTY

Santa Cruz Visiting Nurse Service, American Red Cross, Santa Cruz

##### SOLANO COUNTY

Vallejo Visiting Nurse Ass'n., P. O. Box 312, Vallejo

##### SONOMA COUNTY

American Red Cross Visiting Nurse Service, 14 Western Ave., Petaluma  
American Red Cross Visiting Nurse Service, 620 4th St., Santa Rosa

##### SUTTER-YUBA COUNTIES

American Red Cross Sutter-Yuba Chapter Visiting Nurse Service, Marysville

##### VENTURA COUNTY

Ventura Visiting Nurse Ass'n., Chamber of Commerce Office, 474 E. Santa Clara St., Ventura

### California Morbidity Report

October, 1947

#### Civilian Cases

Reportable diseases	Week ending					Total cases	5-yr. median	Total cases
	10/4	10/11	10/18	10/25	11/1	Oct.	Oct., 1942-1946	Jan. Oct., 1947
Amebiasis (amoebic dysentery).....	4	4	1	3	2	14	1	14
Anthrax.....			1					1
Botulism.....								
Chancroid.....	23	6	7	6	8	50		50
Chickenpox (varicella).....	89	113	126	159	243	730	919	32
Cholera, asiatic.....								
Coccidioid granuloma.....		2			1	3		3
Conjunctivitis—acute								
Infectious of the newborn (ophthalmia neonatorum).....	1	1	1		1	4		4
Dengue.....								
Diarrhea of the newborn.....	2					2		2
Diphtheria.....	15	11	14	14	9	63	108	10
Dysentery, bacillary.....	3	11	7	11	7	39		39
Encephalitis, infectious.....	23	4	5	1	4	12	18	12
Food poisoning.....	7	22	24	26	21	122		122
German measles (rubella).....	39	24	53	49	44	209		209
Glanders.....								
Gonococcus infection.....	799	610	673	569	523	3,179	1,700	27
Granuloma inguinale.....		1			1	2		2
Influenza, epidemic.....	7	5	7	4	3	26	55	7
Jaundice, infectious.....	3	3		2	2	10		10
Leprosy.....								
Lymphogranuloma venereum (lymphopatia venereum lymphogranuloma inguinale).....	5	4	4	8	1	22		22
Malaria.....	1	5	3		1	10	16	10
Measles (rubeola).....	81	87	77	96	90	431	394	6
Meningitis, meningococcal.....	2	2	5	4	4	15	33	2
Mumps, (parotitis).....	154	137	146	154	205	796	1,151	14
Paratyphoid fever, A, B, and C.....	1	3	1	4	3	12		12
Plague.....								
Pneumonia, infectious.....	13	20	16	23	17	89	209	1
Polio myelitis, acute.....	21	24	19	11	18	93	180	7
Psittacosis.....	1		2			3		3
Rabies, human.....								
Rabies, animal.....	1	3	13	1	7	25	32	2
Relapsing fever.....	2	2				4		4
Rheumatic fever.....	16	8	12	11	7	54		54
Rocky Mountain spotted fever.....					2	2		2
Scarlet fever.....	59	70	56	85	63	331	554	4
Septic sore throat.....	3	2	7		7	25		25
Smallpox (variola).....							0	
Syphilis.....	505	335	499	313	436	2,088	2,220	18
Tetanus.....	1	1	1			3		3
Trachoma.....								
Trichinosis.....		1				1		1
Tuberculosis, pulmonary.....	122	100	166	136	162	686	624	7
Tuberculosis, other forms.....	8	8	10	4	14	44	36	8
Tularia.....								
Typhoid fever.....	7	7	1	6	6	27	14	14
Typhus fever.....	1	2				3		3
Undulant fever (brucellosis).....	9	17	5	4	6	41	25	25
Whooping cough (pertussis).....	140	118	86	99	105	548	508	8
Yellow fever.....								
						9,829		133,300

"The educated person understands the basic facts concerning health and disease, protects his own health and that of his dependents, works to improve the health of the community."—"The Purposes of Education in American Democracy," Educational Policies Commission.



